Dediware Software User Manual

Version 2.0

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I. General Description

This user manual illustrates how to install and use DediProg Dediware Software with DediProg programmers. Dediware is innovative and easy to use software that supports StarProg Engineering and ProgMaster Production series programmers.

Dediware has all the necessary functions, including basic functions like read ID, read, blank check, program, verify, batch and advanced function like protection, auto-start, and standalone project which commands are also available.

Dediware has two different modes dedicated to different types of needs. Engineering mode is a specific mode to help engineers to test and develop. Production mode can control several programming devices simultaneously and individually to achieve the best productivity. All updates and further versions of Dediware software are free to download and can be found on DediProg official website: **www.dediprog.com**

II. System Requirements

2.1 Hardware Support

- Dual-core CPU or above
- 100GB Hard drive or above
- 1GB of RAM or above
- USB 2.0

※ For eMMC or NAND IC programming , the faster hardware requirements the better.

2.2 Operating System Requirements

- Windows 8.1
- Windows 8
- Windows 7
- Windows Server® 2008
- Windows Vista®
- Support both 32-bit and 64-bit OS

III. Programmer Information

3.1 Support IC

Dediware software supports the following DediProg programmers.

TYPE / Programmer	SPI Flash	SPI NAND	Parallel Nor/NAND Flash	EEPROM	MCU	CPLD	eMMC
StarProg-F	◎	◎	◎	◎			◎
StarProg-U	◎	◎	◎	◎	◎	◎	◎
StarProg-ATE*	◎	◎		◎	◎	◎	◎
ProgMaster-F4/8	◎	◎	◎	◎			◎
ProgMaster-U4/8	◎	◎	◎	◎	◎	◎	◎

***Support standalone mode.**

3.2 Multi-programmers Capability

Same product models can be driven by one PC or notebook at the same time. The correct connection is shown in Fig. 3-1, the PC connected with all ProgMaster-F4 programmers. Fig 3-2 shown incorrect connection since the StarProg and ProgMaster cannot be connected by 1 PC.

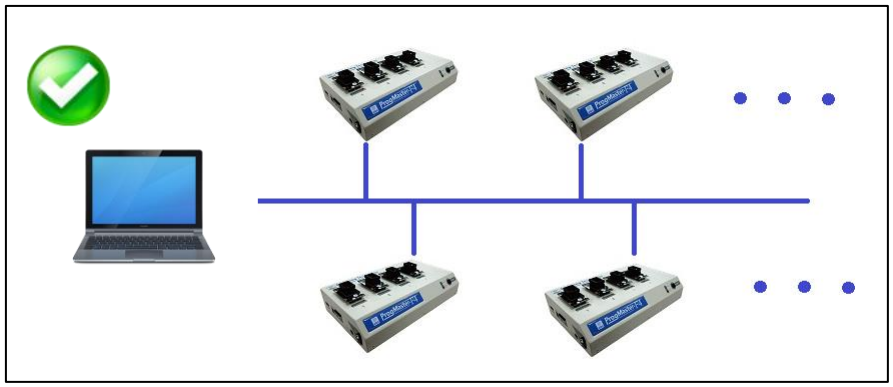


Fig. 3-1 Same model programmers can be connected by one PC

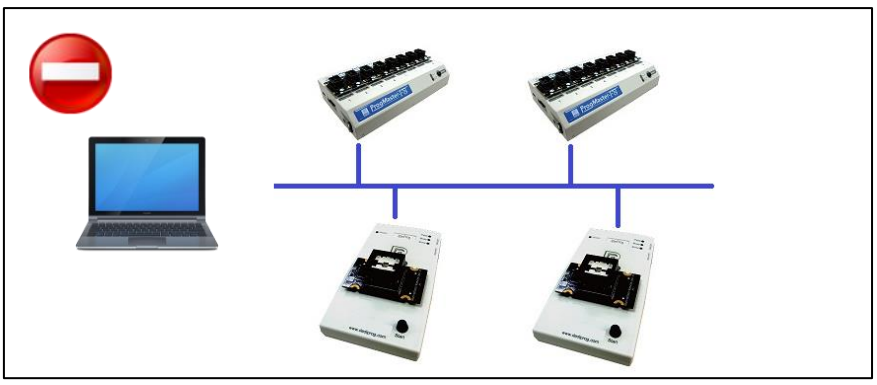


Fig. 3-2 Different model programmers cannot be connected by one PC

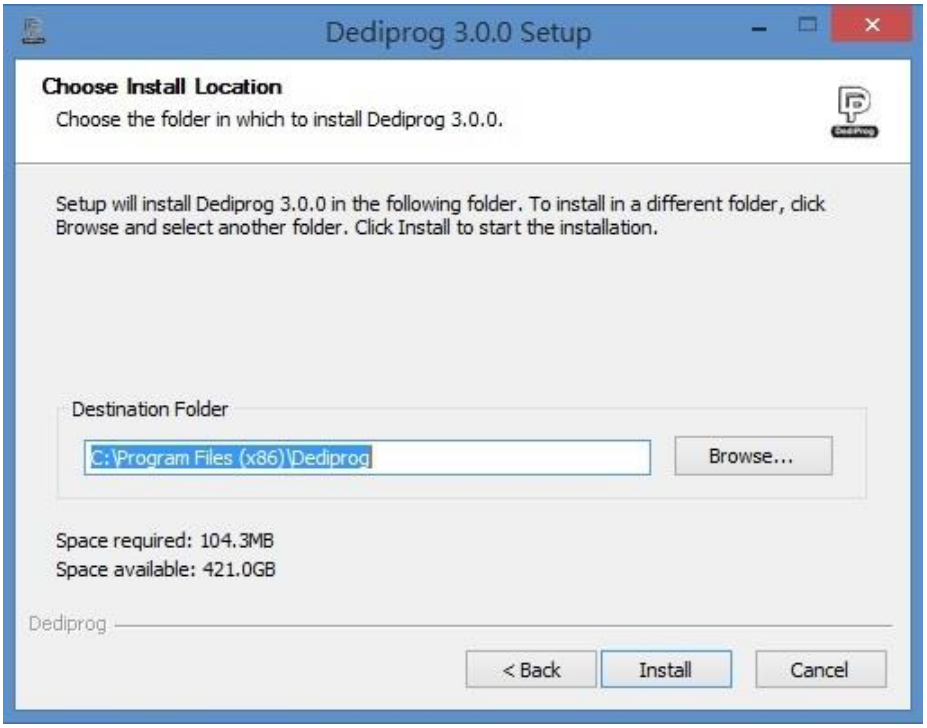
IV. Dediware Installation

Insert the installation CD or download the installation software from DediProg official website: www.dediprog.com/download

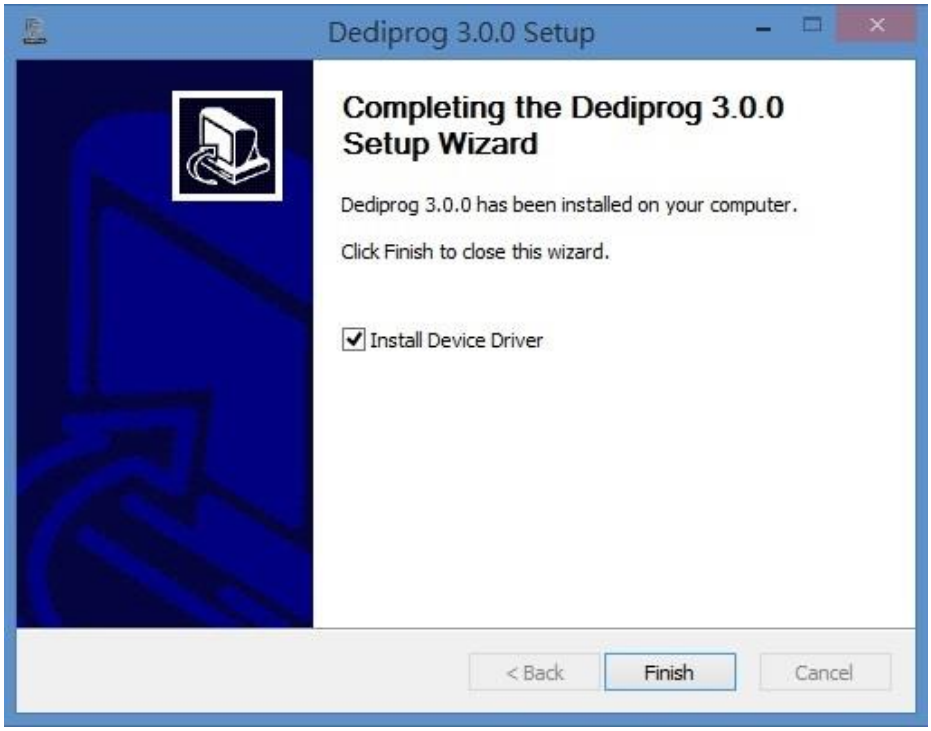
4.1 Run Dediware software

Dediprog 3.0.0 Setup
Welcome to the Dediprog 3.0.0 Setup Wizard
This wizard will guide you through the installation of Dediprog 3.0.0.
It is recommended that you close all other applications before starting Setup. This will make it possible to update relevant system files without having to reboot your computer.
Click Next to continue.
Next >
Cancel

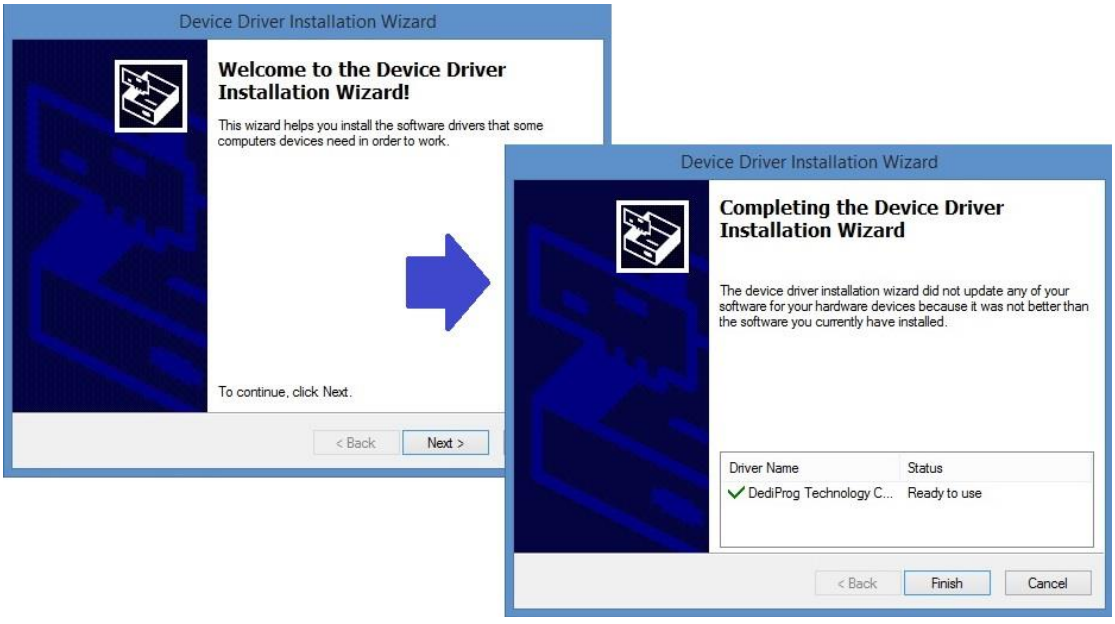
4.2 Select a destination folder to save the installation files, as shown below.


Dediprog 3.0.0 Setup
Choose Install Location
Choose the folder in which to install Dediprog 3.0.0.
Setup will install Dediprog 3.0.0 in the following folder. To install in a different folder, click Browse and select another folder. Click Install to start the installation.
Destination Folder
C:\Program Files (x86)\Dediprog
Browse...
Space required: 104.3MB
Space available: 421.0GB
Dediprog
< Back
Install
Cancel

4.3 Click “Finish” to close the window or check the “Install Device Driver “ to install the programmer driver.



4.4 Programmer driver and Dediware software are installed successfully.


Device Driver Installation Wizard
Welcome to the Device Driver Installation Wizard!
This wizard helps you install the software drivers that some computers devices need in order to work.
To continue, click Next.
< Back
Next >
Device Driver Installation Wizard
Completing the Device Driver Installation Wizard
The device driver installation wizard did not update any of your software for your hardware devices because it was not better than the software you currently have installed.
Driver Name
Status
DediProg Technology C...
Ready to use
< Back
Finish
Cancel

Note：

If you owned StarProg or ProgMaster programmers, please make sure to upgrade your firmware version to 2.x.x before installing new Dediware software. Please refer to **VIII. FAQ**

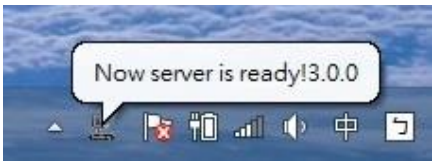
V. Dediware Introduction

5.1 Open Dediware

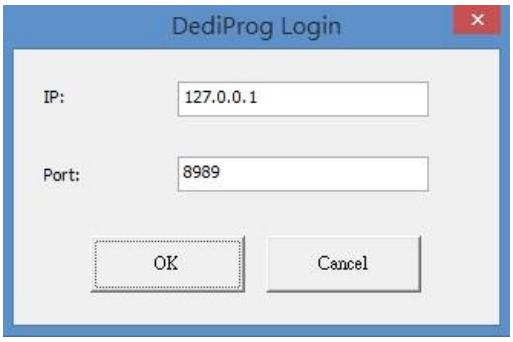
Double-click to open Dediware.

Dediware is based on Client-Server technology.

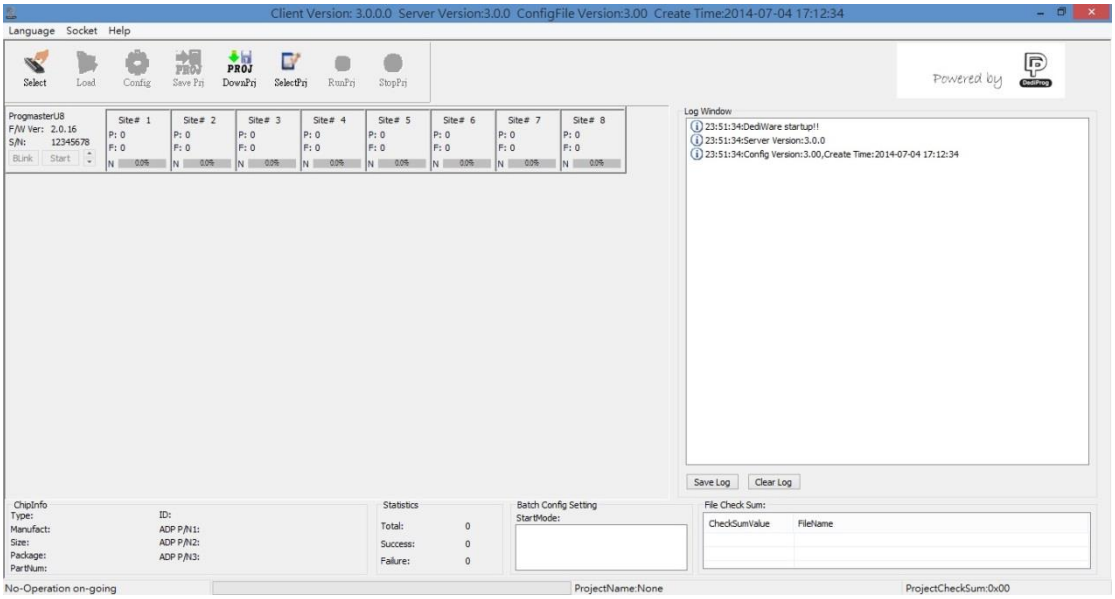
The Dediware icon will shows in the windows taskbar.



Dialogue box will show the Client login message. Click OK to connect with Server. If an error message appears, please refer to **VIII.FAQ**



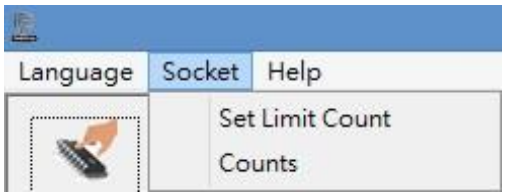
5.2 Software Interface



5.2.1 Main menu

A. Language：English, simplified Chinese and traditional Chinese.

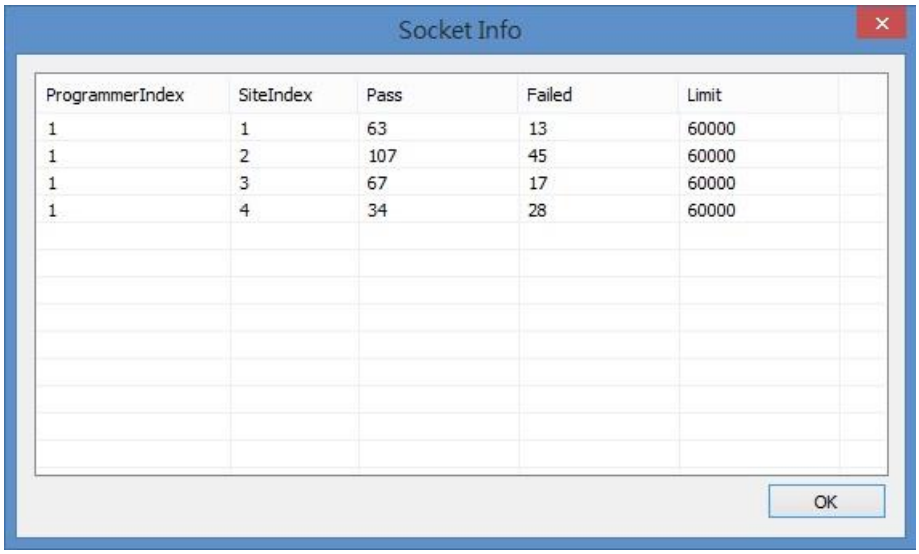
B. Socket：Set and check the number of times the socket adaptor is used.



a) Socket > Set Limit Count：

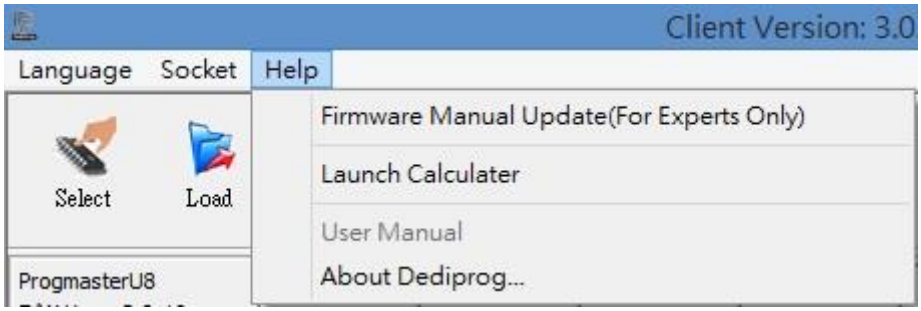
Setting the numbers of times socket adaptor is used. Software will pop up the message when socket adaptor reaches the number of times in the settings. This function helps to ensure the quality control of socket adaptor especially when used in the production programming.

b) Socket > Counts：Check the status of each socket adaptor.



C. Help：

Offers the firmware manual update information, easy to open Windows calculator, user manual and shows the Dediware version.



5.2.2 Toolbar

The toolbar includes icons for quick access to the majority of the functions. Please refer to **VI.Engineering Mode** for detail introduction.

5.2.3 Programmer Status Window

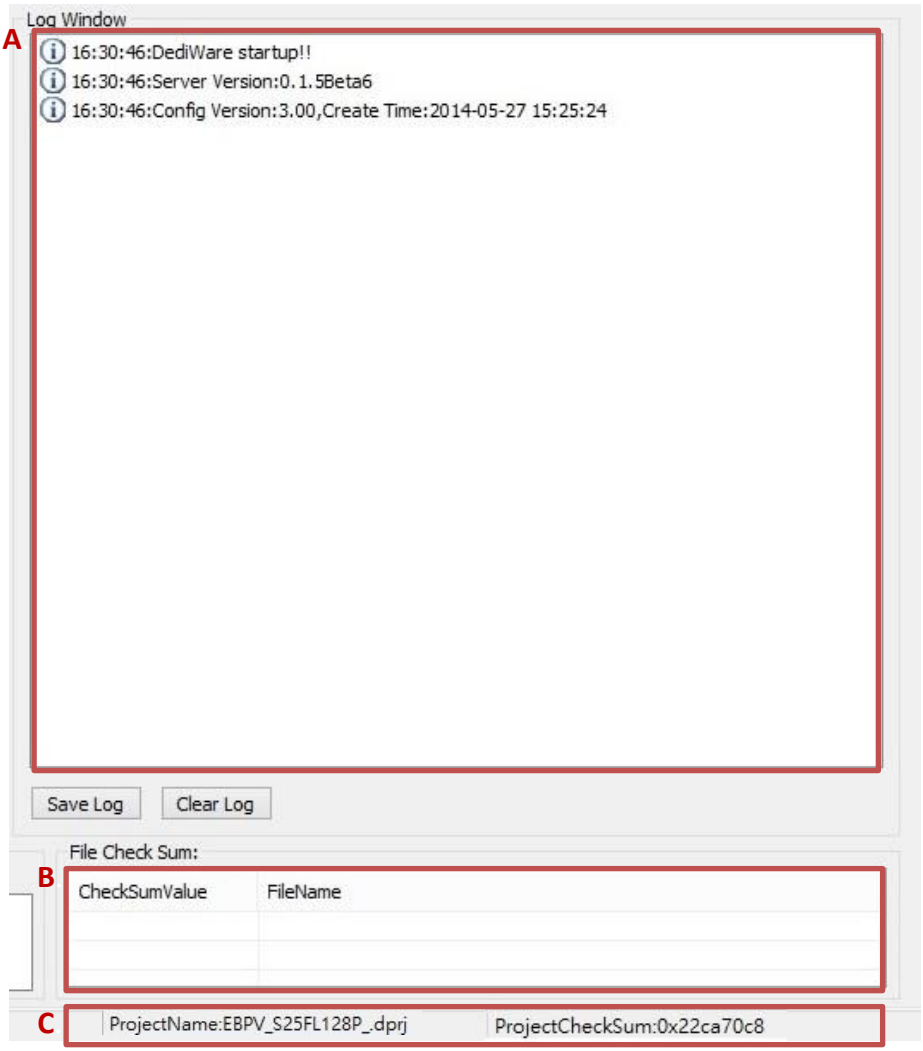
This area indicates the status of every programming programmer. For example as shown below, the red frame shows two ProgMaster-U4 statuses, including model name, firmware version and serial number(S/N).The Site#1~4 show each socket adaptor status.

The **Blink** and **Start** function can only be set during production mode after downloading the project.

- Blink：All lights on the programmers will be on. Use when several programmers are connected.
- Up/down button ：Set the orders of programmers. The top is the first programmer.
- Start：When Start Mode is in manual, click button to start the production programming.

*Please note that, Dediware software only accept that same programmer model connected at the same time.

5.2.4 Log Window



A. Log Window：

Log window records all progress information and steps made which can be saved to the installation folder automatically.

Click “Save Log “to save as a new file .Click “Clear Log” to clean the log window and record to a new file.

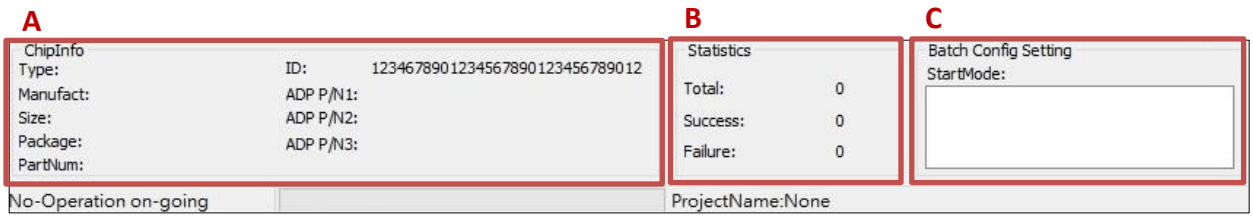
B. File Check Sum：

After downloading the programming file, the file checksum and file name will show in the table. Several files loaded at the same time will be shown in the table based on their priority.

C. ProjectName / ProjectCheckSum：

After downloading programming project, the project checksum and project name will show here.

5.2.5 Information window



A. Chip Info：

- Type: IC type
- Manufact: IC manufacture
- Size: Memory size
- Package: IC package
- PartNum: Part number
- ID: Chip ID
- ADP P/N1~3: Socket adaptor part number

B. Statistics：

Statistics Window indicates the number of successful, unsuccessful (Failure), and total programmed chips.

C. Batch Config Setting：

Batch Config Settings contain information of batch and start mode setting.

VI. Engineering Mode

Engineering mode offer the programming, verify and testing functions. Users can turn project file to the production mode.

6.1 Select: Choose IC manufacturer /part number /package

- If the manufacturer is known, user can select the chip type and manufacture directly. The related IC part numbers will show in the chip list.
- Search IC by typing IC part number in the field circled by the blue frame. It is recommended to choose “All” in the “Chip Type” and “Manufacture” to avoid limiting the search results.
- The input field has the memory function to store 5 sets of IC part number that can be selected by pressing the button on the right.
- Double-click selected IC in chip list.
- The searching process is not case-sensitive.

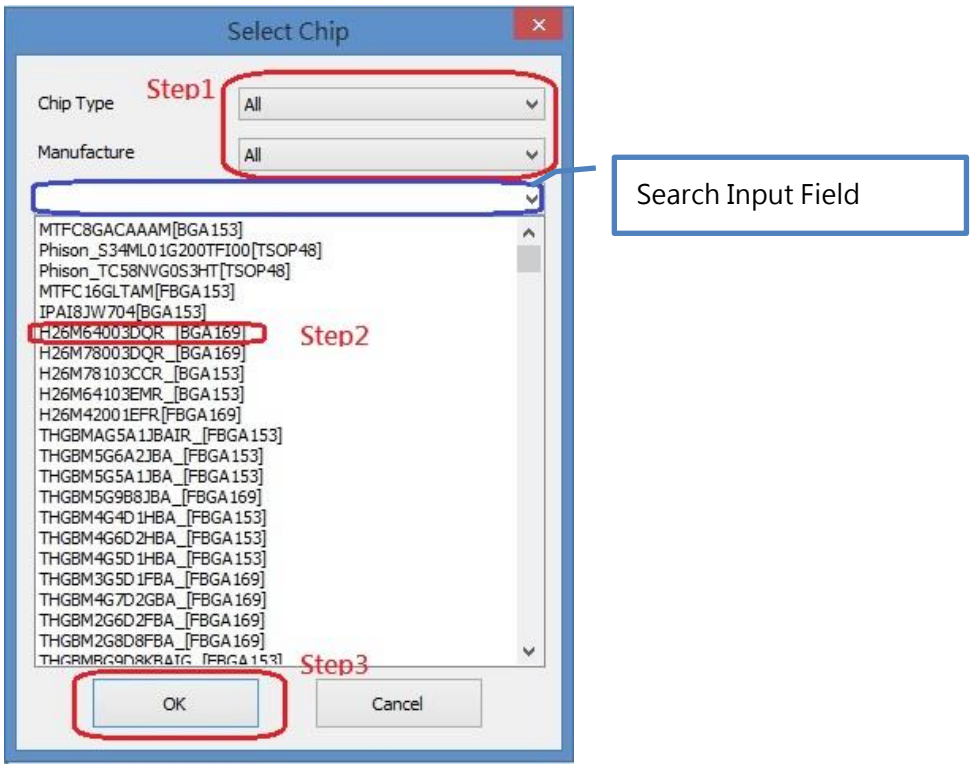
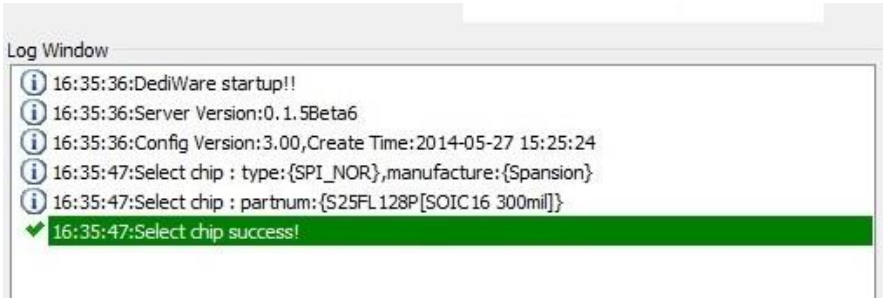
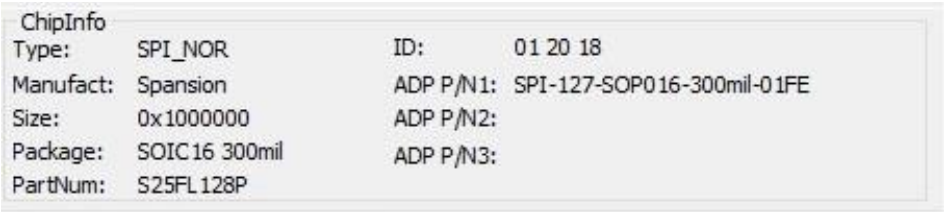


Fig. 6-1

Log window will show the successful message as shown below after choosing the IC.



IC information will also shows in the ChipInfo window.

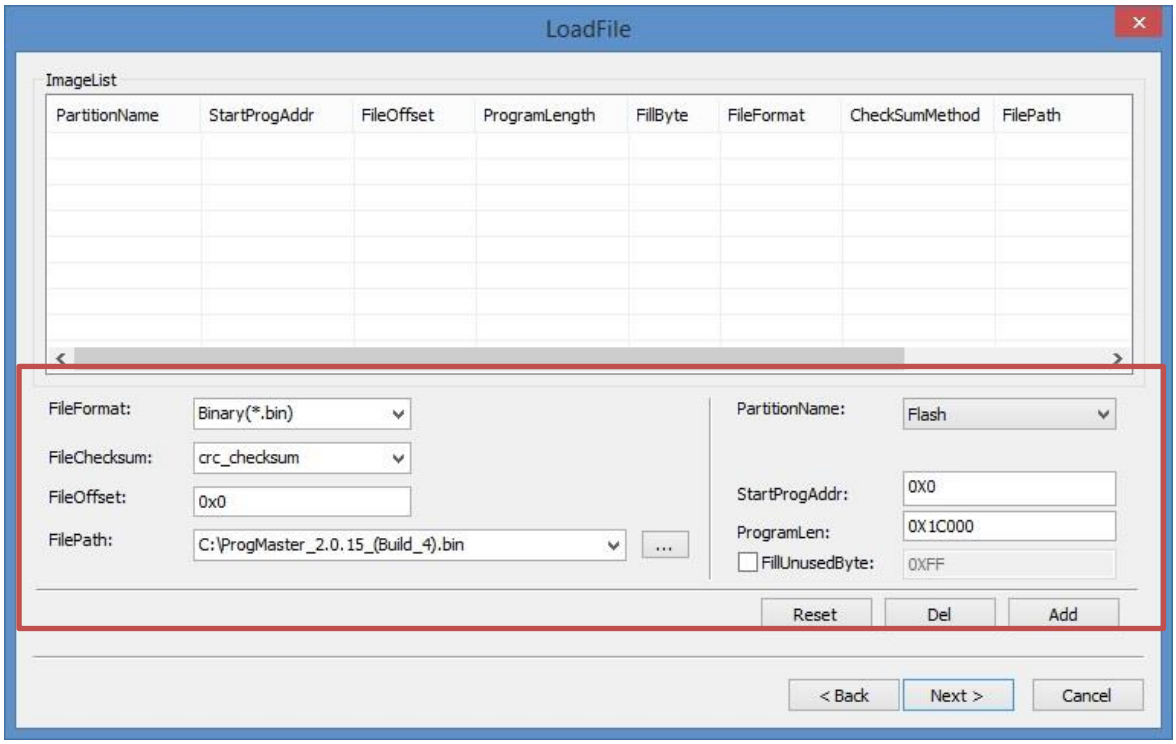


6.2 Load

Select icon **Load** to load the file intended for the programmer. According to different IC type, the file settings will divide into normal IC, eMMC and NAND Flash.

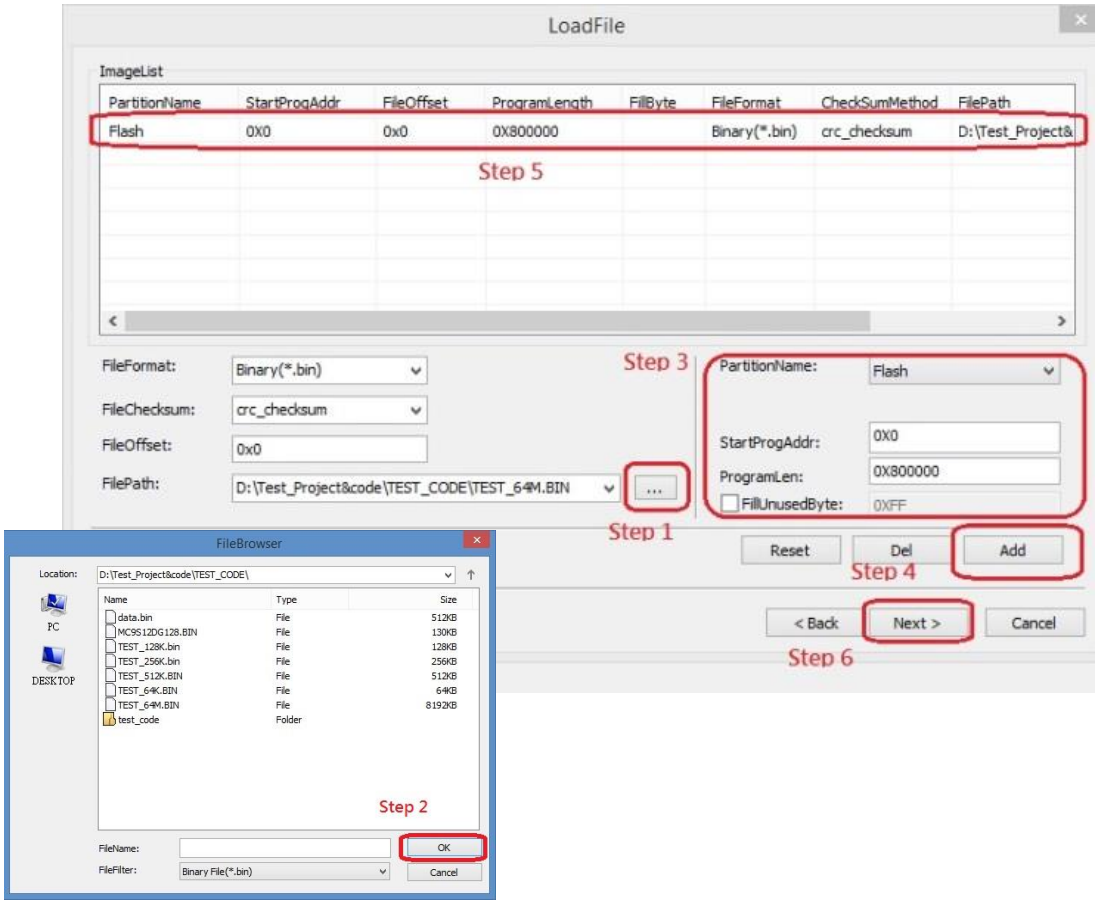
6.2.1 Normal IC Programming Settings

User can load one or several files at the same time.



- **File Format**：The format of programming file.
- **File Checksum**：File checksum
- **File Offset**：Set the address to start loading to buffer
- **File Path**：Shows the path of programming file.
- **Partition Name**：If the IC has more than one memory that can be programmed, the partition names can be selected in this drop-down list. (e.g. IC has Flash and OTP memory and the partition name list will have these two options.)
- **StartProgAddr**：Select the file to programmer Buffer. When loading several files to the same partition, make sure that the memory address is set well to avoid covering the original date.
- **ProgramLen**：The file size.
- **FillUnuseByte**：Check the box to assign Unused Byte .The default value is 0xFF.
- **Reset**：Clear all programming files in the image list.
- **Del**：Delete the selected file in the image list.
- **Add**：Add the programming file to the image list.

Load File Steps：



Step1：Click on the button to open the load file dialogue box.

Step2：Find the programming file.

Step3：Confirm the parameter setting.

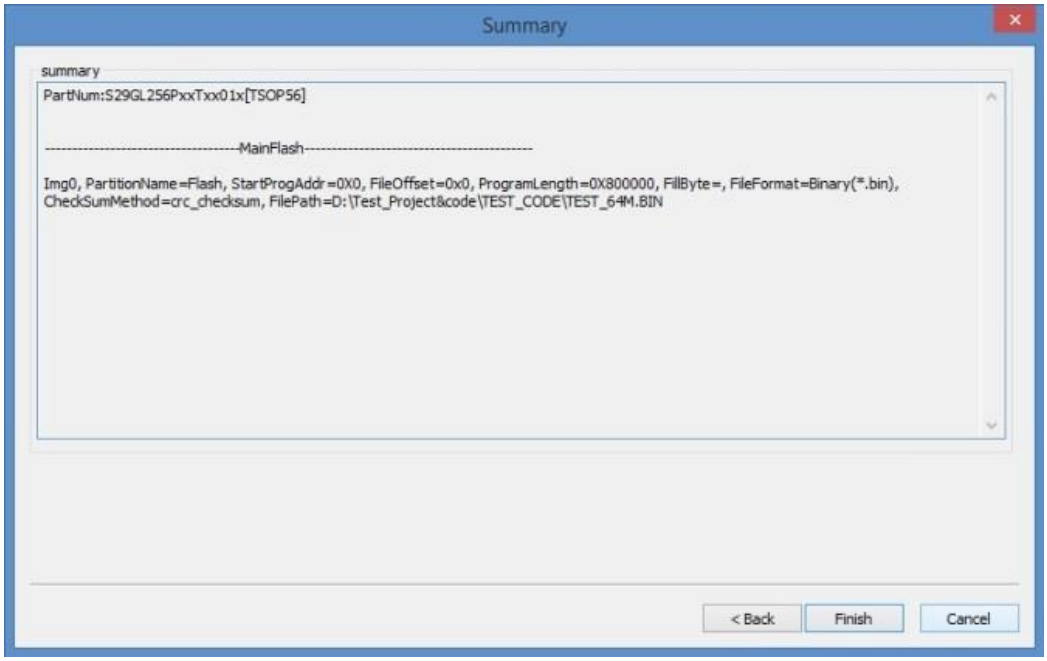
Step4：Click “Add” to add the file to the list. Repeat Step 1 to 4 to load more files.

Step5：Files information will show in the “ImageList”, if not, click “Del” or “Reset” to restart setting.

Step6：Click “Next” after checking all settings are correct.

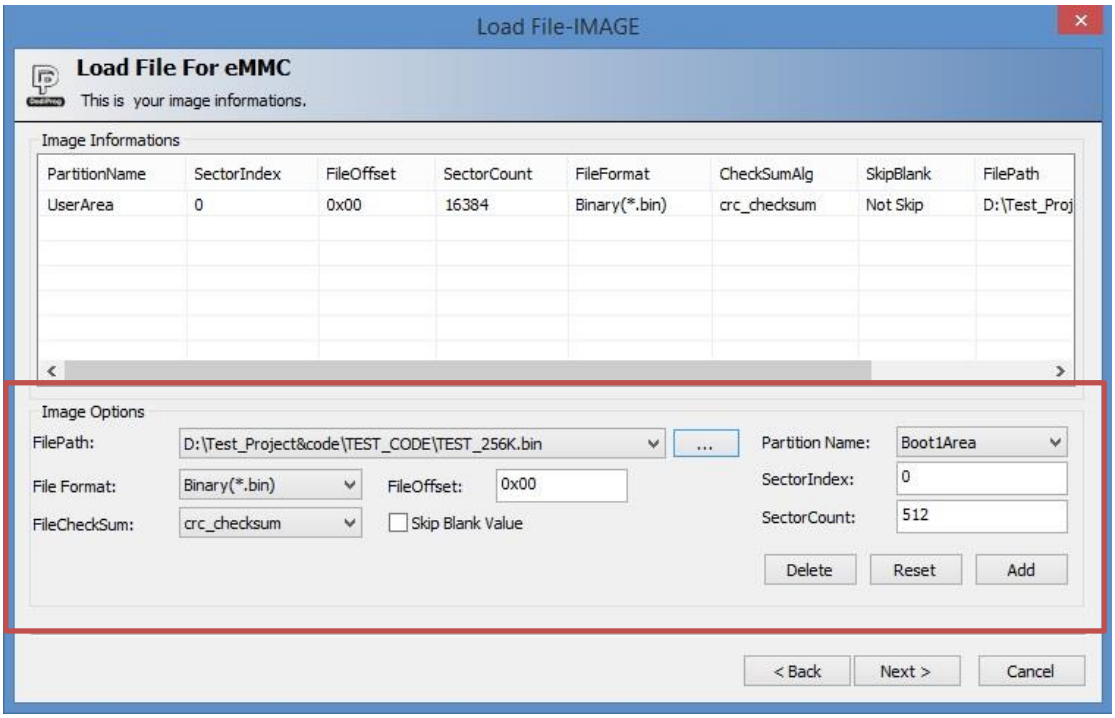
※ Once the error or warning message appears, please refer to **VIII. FAQ**

Step7：Summary window shows all setting information.



6.2.2 eMMC Programming Settings

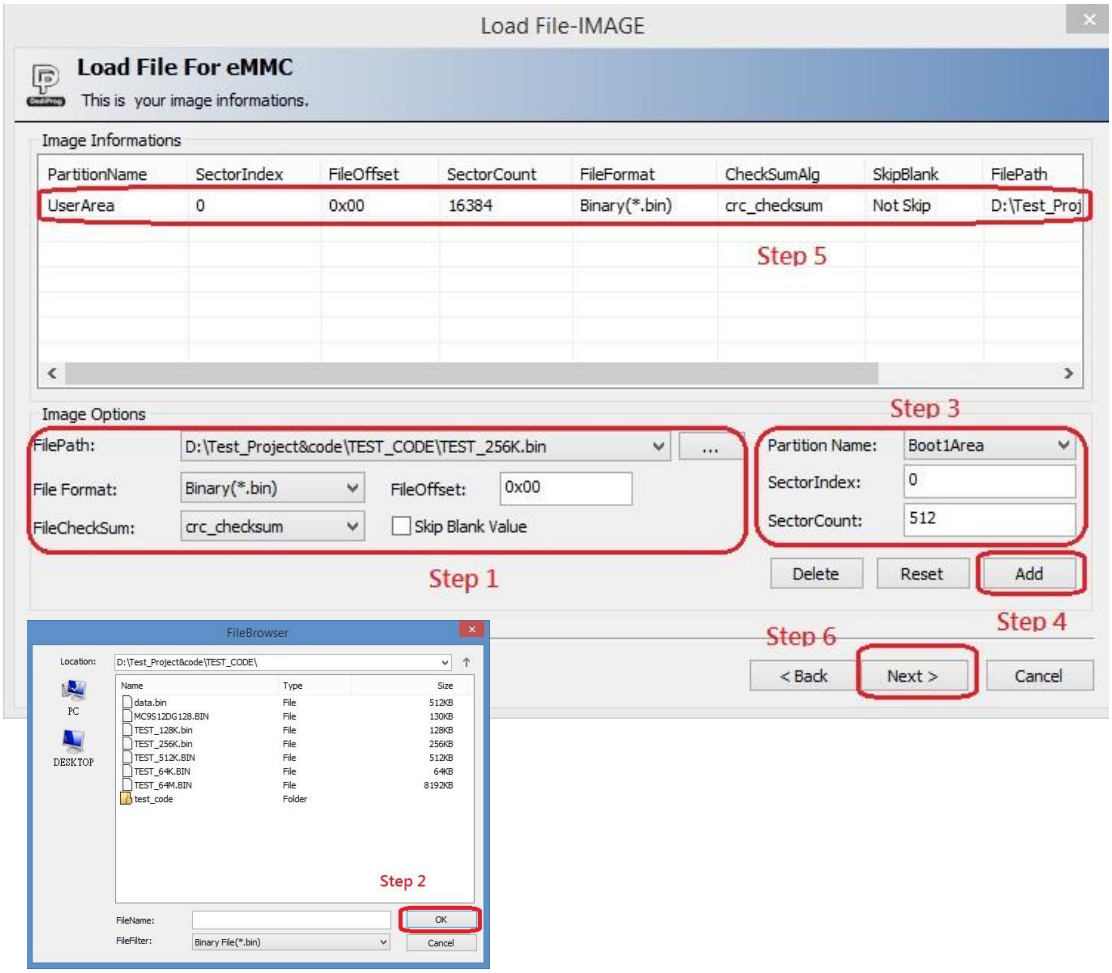
User can load one or several files at the same time.



(From left to right)

- **File Format**：The format of programming file.
- **File Checksum**：File checksum
- **File Offset**：Set the start address to start loading to buffer
- **File Path**：Shows the path of programming file.
- **Skip Blank Value**：Check the box to check the blank data and skip the blank when programming. Reduce the programming time.
- **Partition Name**：eMMC offers UserArea,Boot1Area and Boot2Area.
- **Sector index**：Set the start address of eMMC sector.
- **Sector count**：The total number of programming sector.
- **Reset**：Clear all programming files in the image list.
- **Del**：Delete the selected files in the image list.
- **Add**：Add the programming file to the image list.

eMMC Load File Steps：



Step1：Click button to open load file dialogue box.

Step2：Find the programming file.

Step3：Confirm the parameter setting.

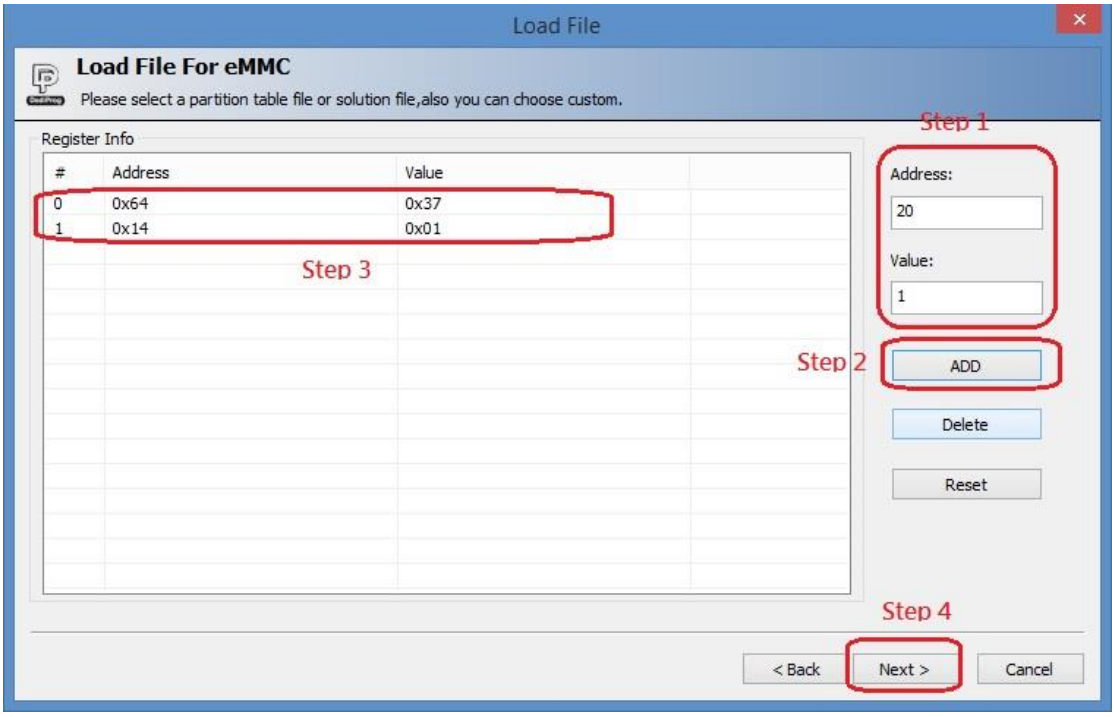
Step4：Click “Add” to add the file to list. Repeat Step 1 to 4 to load more files.

Step5：Files information will show in the “Image List” window, if not, click “Del” or “Reset” to restart setting.

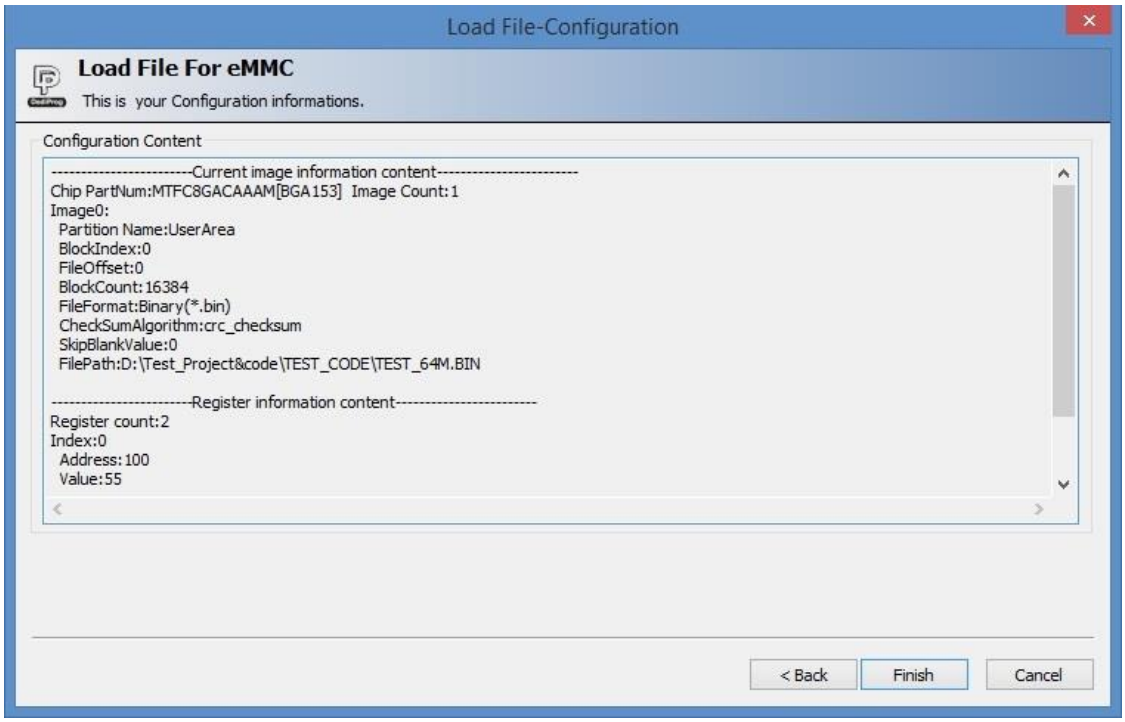
Step6：Click “Next” after checking all settings are correct.

※ Once the error or warning message appears, please refer to **VIII. FAQ**

Step7：Set ext CSD



Step8：Summary window shows all settings information.



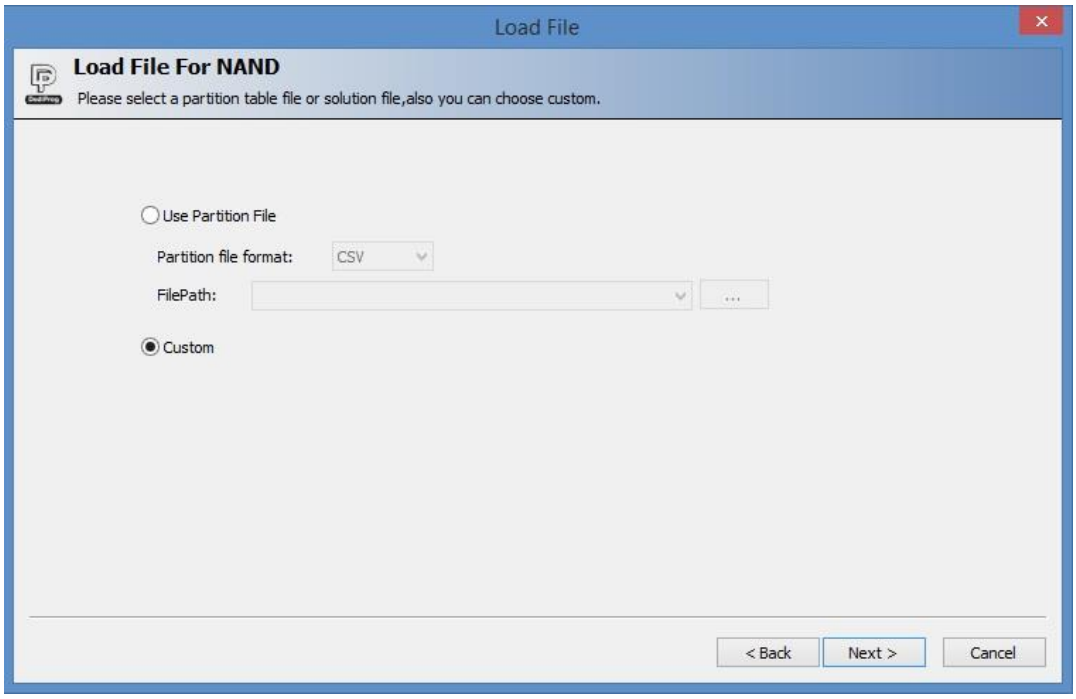
6.2.3 NAND Flash Programming Settings

A. Use Partition File：

Support CSV, DEF and MBN formats.CSV is Comma Separated Values Format, DEF is Group Define File Format and that MBN is Qualcomm Multiply Partition Format.

B. Custom：

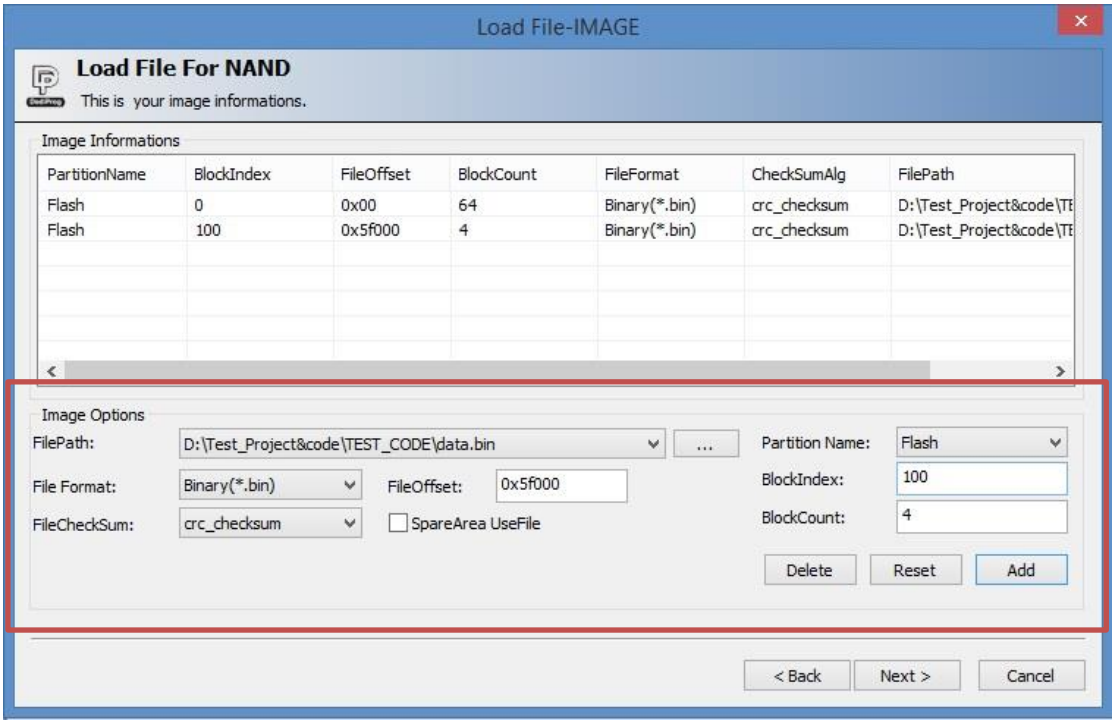
Set the information of programming file.



a) Select "Custom" to set programming file.

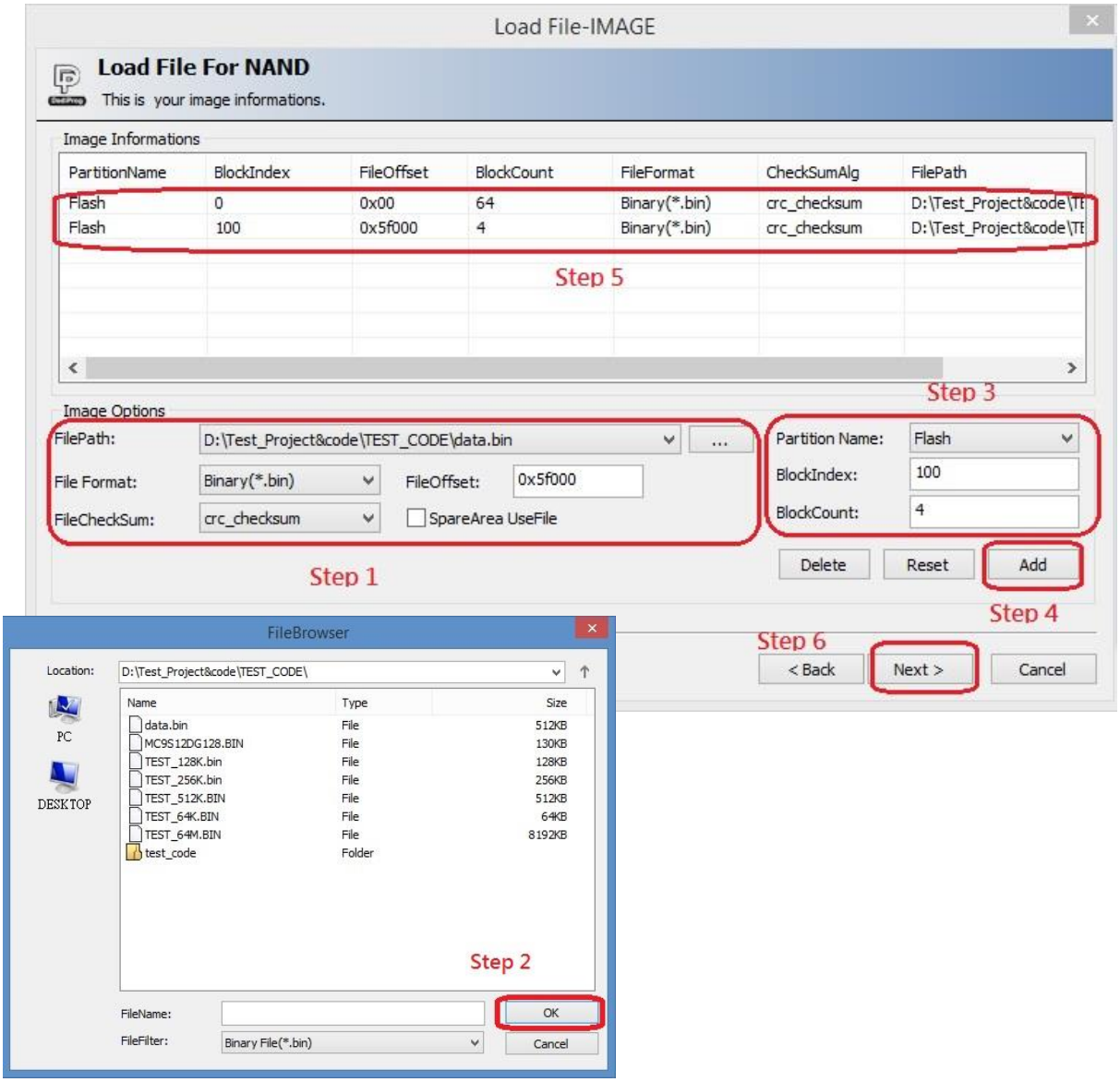
b) Load NAND Flash File function

User can load one or several files at the same time.



- **File Format**：The format of programming file.
- **File Checksum**：File checksum
- **File Offset**：Set the address to start loading to buffer
- **File Path**：Shows the path of programming file.
- **SpareArea UseFile**：Check the function to enclose the SpareArea with file.
- **Partition Name**：Only Flash option can be selected.
- **Block index**：Setting the start of block.
- **Block count**：Total block number of programming.
- **Reset**：Clear all programming files in the image list.
- **Del**：Delete the selected files in the image list.
- **Add**：Add the programming file to the image list.

c) NAND Load File Steps：



Step1：Click on the button to open the load file dialogue box.

Step2：Find the programming file.

Step3：Confirm the parameter settings.

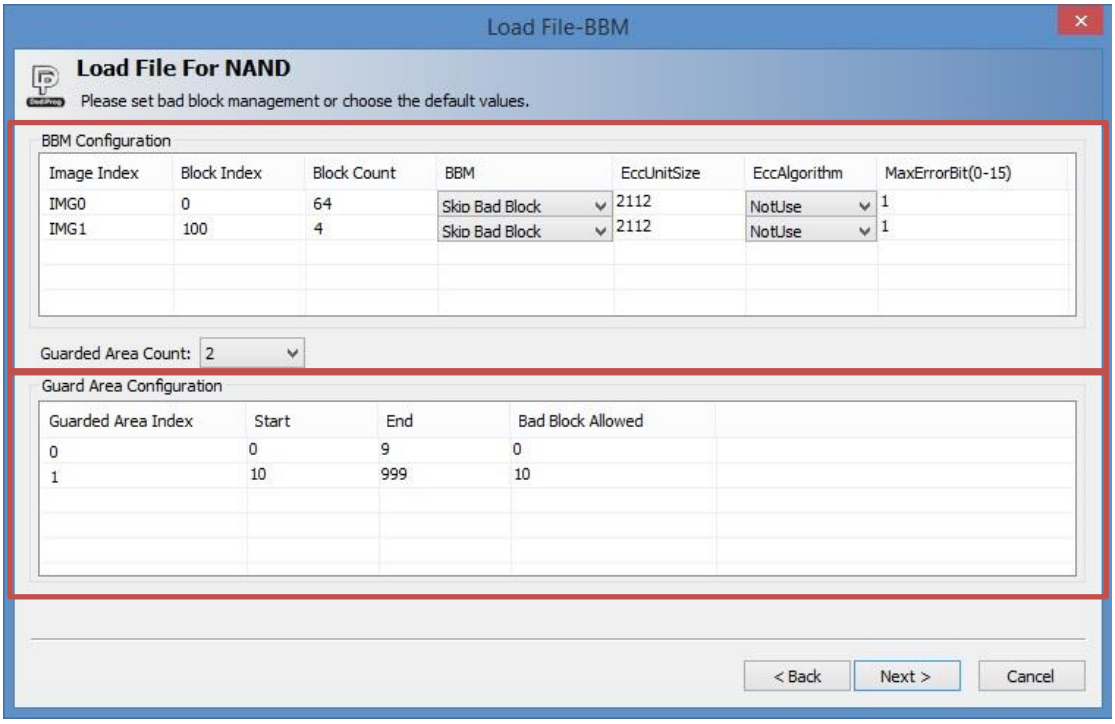
Step4：Click “Add” to add the file to list. Repeat Step 1 to 4 to load more files.

Step5：Files information will show in the “Image List” window, if not, click “Del” or “Reset” to restart setting.

Step6：Click “Next” after checking all settings are correct.

※ Once the error or warning message appears, please refer to **VIII. FAQ**

Step7：BBM Settings



A. BBM Configuration:

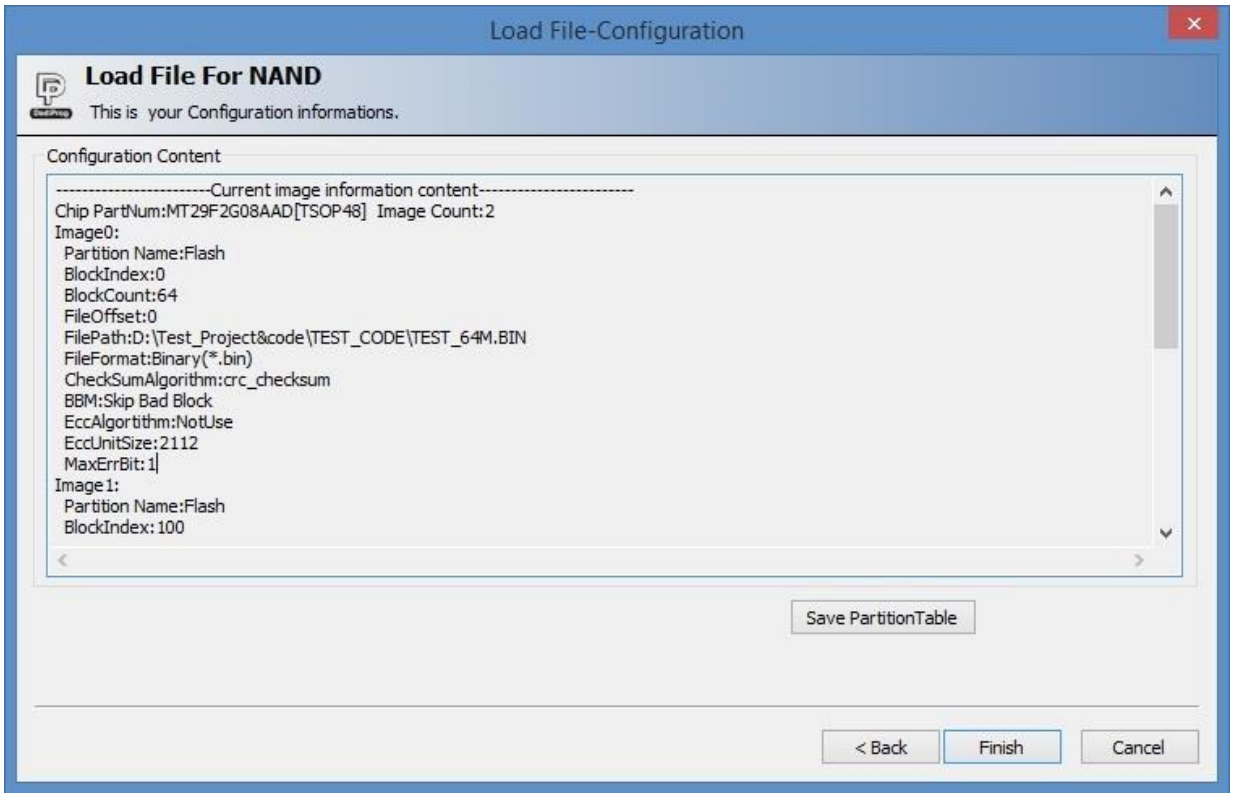
Set it according to the number specified at Load File. As the above figure shows, two Image files need BBM, EccUnitSize, EccAlgorithm, and MaxErrorBit settings.

- **BBM**：Bad block management.
- **EccUnitSize**：The unit size of ECC. In this case, 2112 Byte is used as the unit.
- **EccAlgorithm**：ECC calculation.
- **MaxErrorBit**：Set the maximum error bit of each unit. In this case, for 2112 Bytes, 1 bit error is allowed.

B. Guarded Area Configuration:

For setting NAND Flash bad block. First, Guarded Area Index is 1; Block0 to Block9 do not allow bad block. Second, Block 10 to Block 999 can allow 10 bad block. If one of these two conditions is met in the programming process, this IC will be considered as a failed IC.

Step8：Summary window shows all settings information. Save the settings by click “Save Partition File”. Select “Use Partition File” to load the file next time.



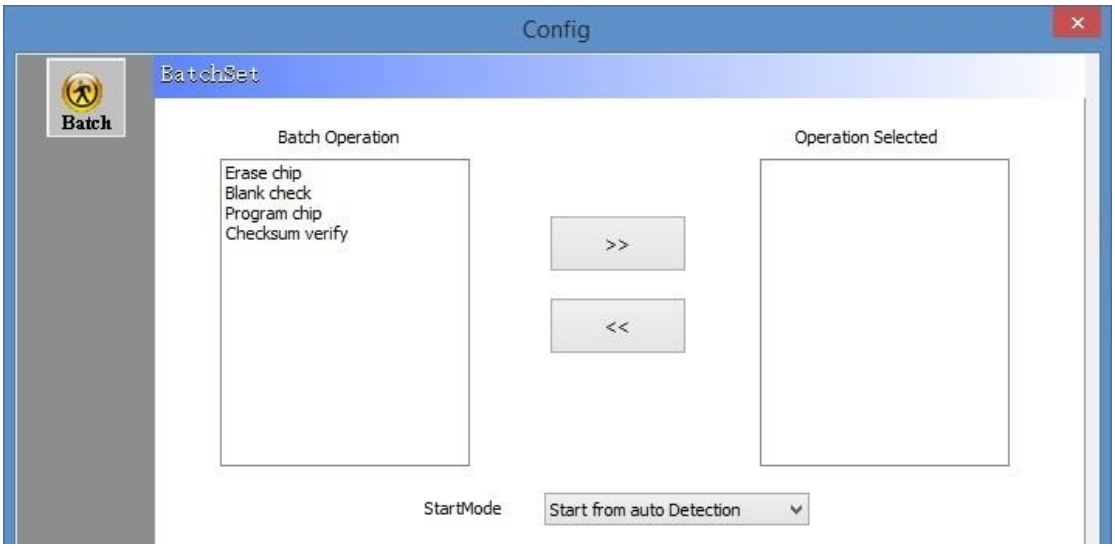
Note：

NAND Flash programming function includes the BBM and ECC setting.If user cannot find the suitable BBM and ECC for programming setting.Please contact DediProg.

6.3 Config Setting

6.3.1 Batch Settings

User can double-click or click >> to select options or click << to remove.



6.3.2 StartMode Setting

To meet user needs, Dediware offer three production modes.

A. Start from Manual Mode：

Click “Start” in Dediware or press the start button on programmer, the production mode will be activated.

B. Start from Auto Detection：

Dediware will detect inserted chip and start to program automatically after running the RunPrj.

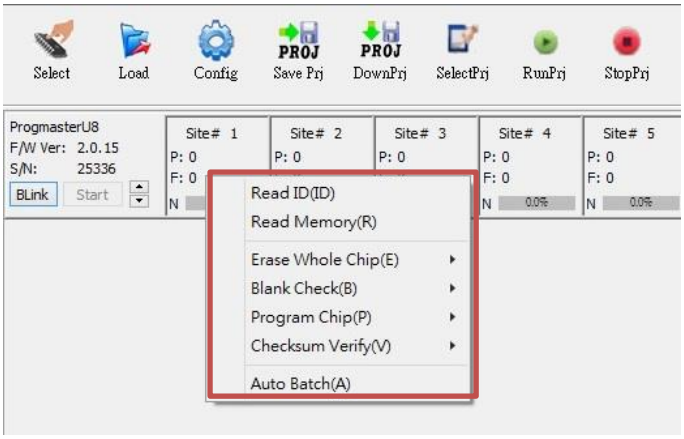
C. Start from Handler：This function is suitable for DediProg automatic system.

Note：

Programmer has the auto IC contact testing function in manual and auto detection mode. Users must pick out the IC on the socket adaptor after programming. Please refer to **VIII. FAQ**

6.4 Programming function

Move mouse over the site and do right-click. The programming function will shows as the red frame.



6.4.1 Single Socket Adaptor

- **Read ID**：Read the ID of IC and shows in ChipInfo.
- **Read Memory**：Read the IC data and compare with the file date. Please refer to **6.4.3 Read Memory**.
- **Erase Whole Chip**：Erase whole IC memory. If IC has several memories which can erase single area memory.
- **Blank Check**：Check if the target chip is blank or not.
- **Program Chip**：Writes the selected file data into the chip.
- **Checksum Verify**：Content verification between chips and loaded file.
- **Auto Batch**：Run the programming settings of batch in Config.

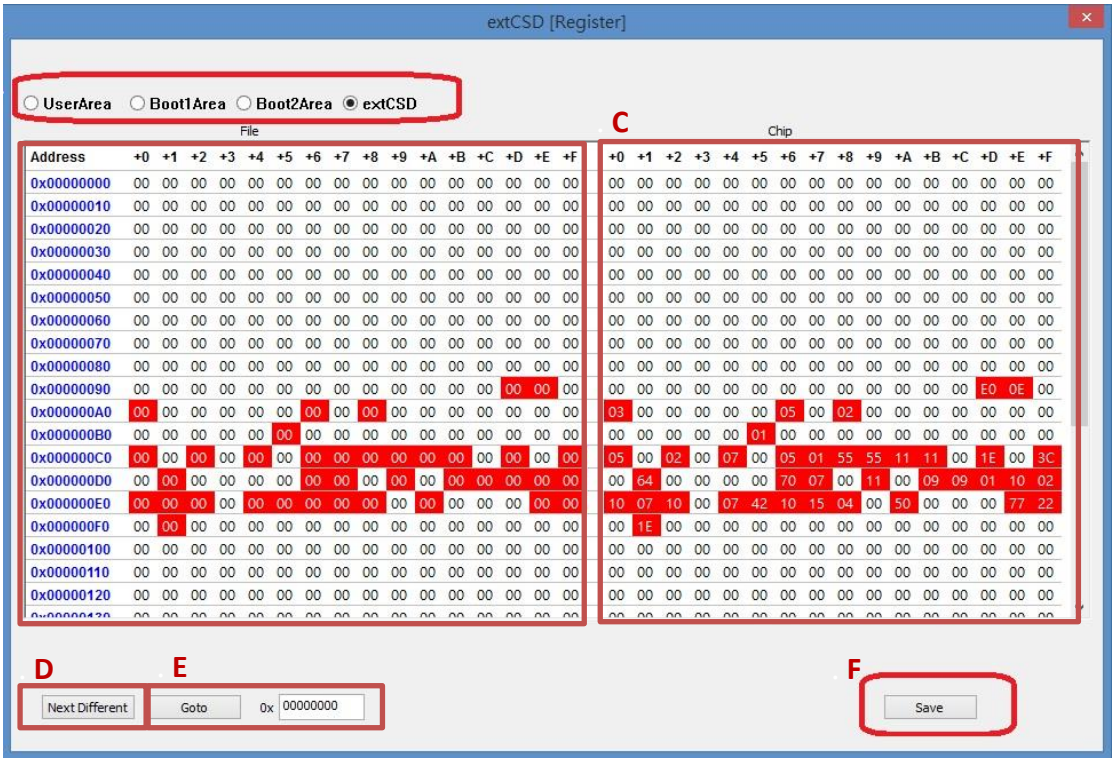
6.4.2 Function Activation Timing

Action / Function	Not select IC	Selected IC	Selected IC And load project	Selected IC ,load project, setting Config/Batch
Read ID	×	✓	✓	✓
Read Memory	×	✓	✓	✓
Erase Whole Chip	×	✓	✓	✓
Blank Check	×	✓	✓	✓
Program Chip	×		✓	✓
Checksum Verify	×		✓	✓
Auto Batch	×			✓

※When doing the project programming, the single socket function will be disabled.

6.4.3 Read Memory

Open Read Memory as shown below. In this case, it is program eMMC .



A. Area Select

If the selected IC has parts of memory, the user can switch the memory area after Read memory. The area function is eMMC in this case.

B. File Window (Buffer)

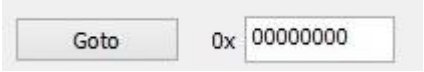
Files contents will be displayed in this area.

C. Chip Window

Chip contents will be displayed in this area. The data will automatically compare with file data and show the differences in red color.

D. Next Different

Dediware will indicate the differences between the loaded file and edited file.

E. Goto 

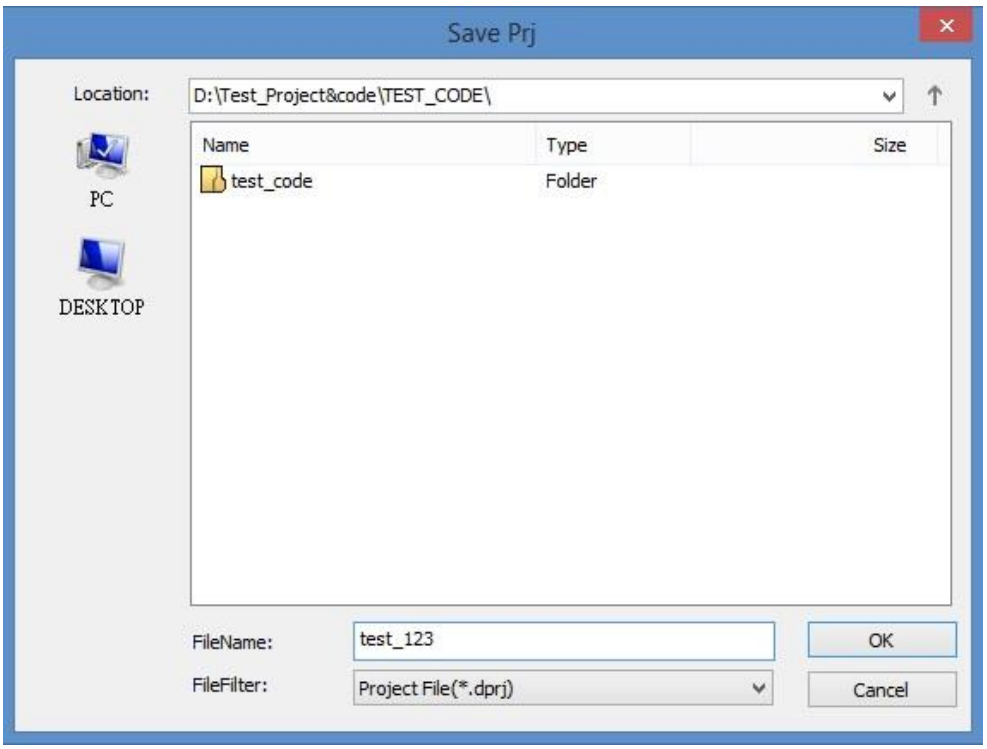
User can assign Dediware to go to the address the user wants to examine by entering line number into the column.

F. Save

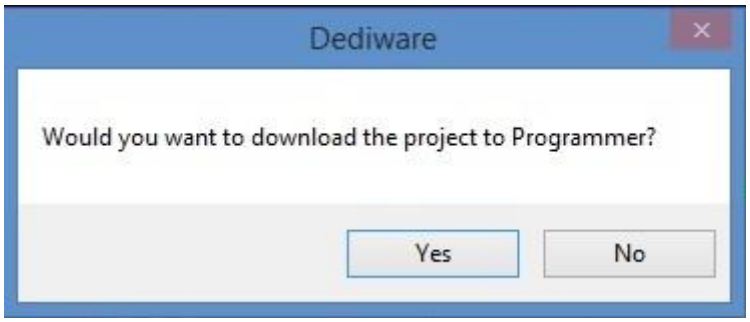
Save the chip data of each partition.

6.5 Save Project

After Load File, Config settings and verification, Dediware is ready to save to project for production use. Click **SavePrj** and the window shows below, click **OK** to save the file.

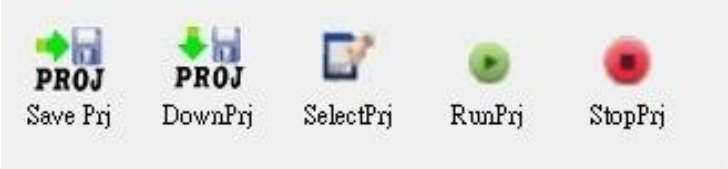


After saving the file, Dediware will ask for downloading the project to programmer. If yes, the project will download to SD card and switch to production mode. Otherwise select No to close the software.



VII. Production Mode

Production function as below,

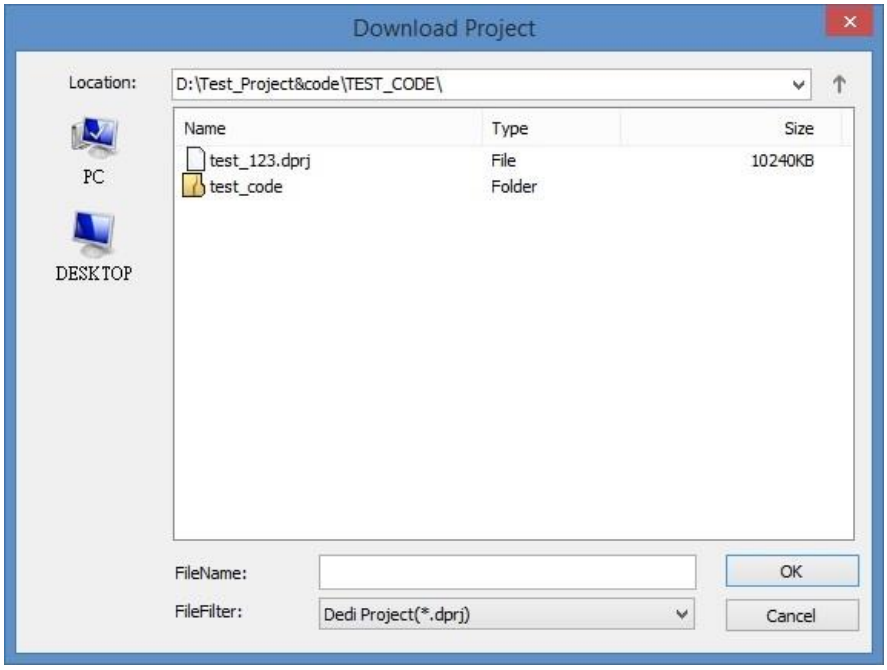


- **Save Prj**：Save the programming file, batch and start mode settings as a programming project for production use.
- **DownPrj**：Download the project to the SD card which is inserted to the programmer. The transmission is more stable and faster by a SD card than an USB.
- **SelectPrj**：Select the project in the SD Card.
- **RunPrj**：Run the project.
- **StopPrj**：Stop the project.

Normal Steps: Load project > Select Project > Run Project > Stop Project

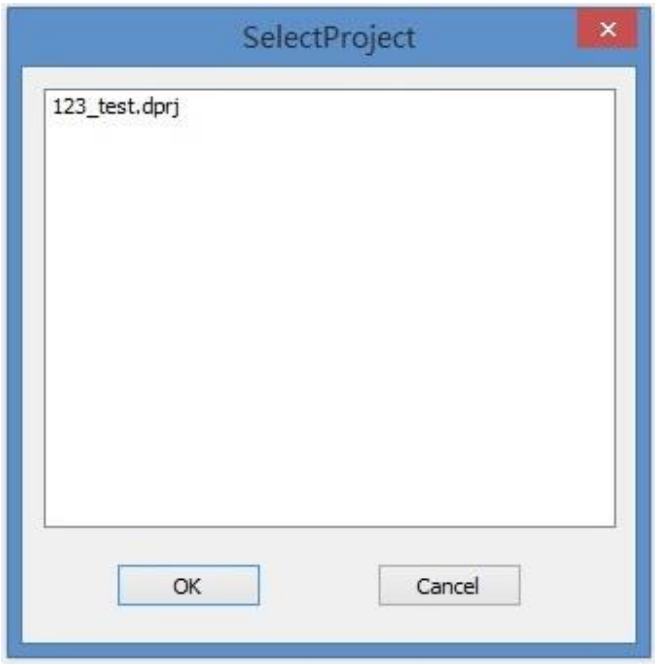
7.1 DownPrj：Download and select project.

Ensure that the SD card is inserted to the programmer before downloading the file to it. Select the file and click “OK”, then the file will be downloaded to the SD card.



Dediware will select the file which the user downloads to the SD card previously as the default. If this is not your programming file, use “SelectPrj”

to re-select as shown below,



After selecting the file, the window will show IC information, batch setting, Start Mode, File Checksum, ProjectName and ProjectCheckSum.

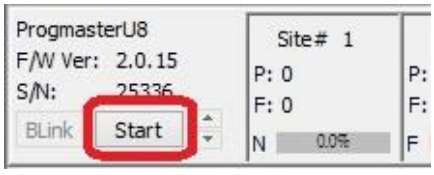
7.2 Run Project

Dediware will detect every socket site status after clicking” Run Prj”. If there is no socket adaptor on the site, the log window will shows in yellow color.

When programmer is ready for production, Dediware will program by the start modes selected by the user before.

A. Start from Manual Mode：

Click “Start” in Dediware or press the start button on programmer, the production mode will be activated.



B. Start from Auto Detection：

Dediware will detect inserted chip and start to program automatically after running the RunPrj.

C. Start from Handler：This function is suitable for DediProg automatic system.

7.3 Stop Prj:

Click on “Stop Prj” to stop project programming.

7.4 CLI & API Control

DediProg provides users with detailed API for software redevelopment so users can easily integrate our programmers with 3rd party automation such as ATE. Please contact with DediProg for further information.

VIII. FAQ

Q1. The message box shows up when opening Dediware

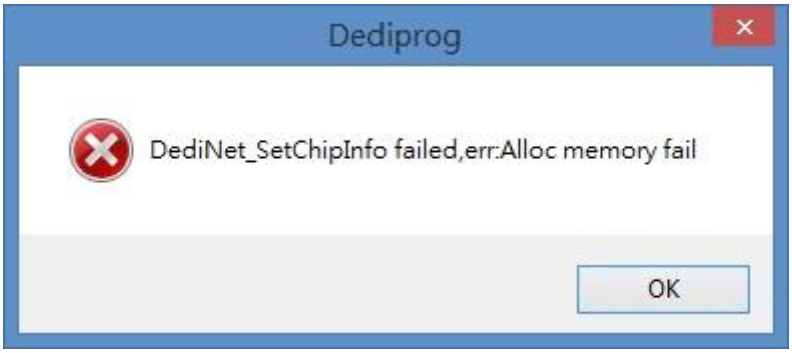
1. Plug in new programmer or the order has changed, please reset the programmer order.

- The orders of programmers have been changed, restart Dediware.
- Computer does not detect any programmer, check the power of computer.
- USB disconnected.

2. Query Device info failed or count is zero, please check if the ProgMaster has plug in.

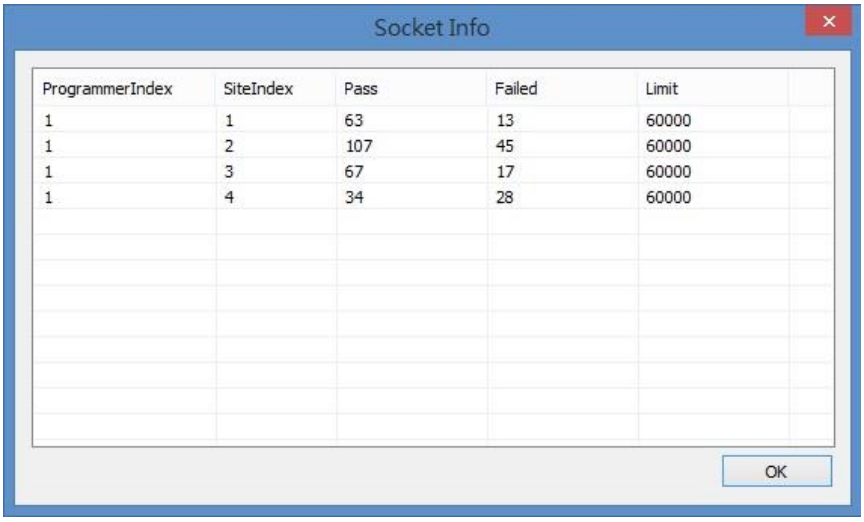
- Check the power of programmers.
- USB disconnected.
- Check if the USB drivers have been installed.
- Programmer firmware does not match with Dediware software. Please update the Dediware version.

3. Please contact DediProg when you see this unusual message.



Q2. Right-Click can't execute any function after inserting socket adaptor?

Please select Menu > Socket > Socket count to confirm the socket adaptor information. If socket adaptors do not show any following information that means socket adaptor disconnected or the control IC of socket adaptor has broken. Please contact DediProg.



Q3. Programmer doesn't detect the socket adaptor on the programming site after run project?

Please refer to Q2 to check the socket information. Maybe socket adaptor is disconnected or control IC is broken.

Q4. Do I have to pay extra fee to upgrade my Dediware or programmer firmware?

DediProg offers **FREE** software and firmware update once users buy StarProg-F / U and ProgMaster series programmers. User can download the latest software on DediProg website.

Q5. How to upgrade my programmer firmware ?

New Dediware version (3.x.x) has to use the 2.x.x firmware version.

1.If firmware version is 1.x.x，please refer to the following steps for update.

Step 1：Install the new version of Dediware and the firmware (2.x.x) will be in the installation folder.

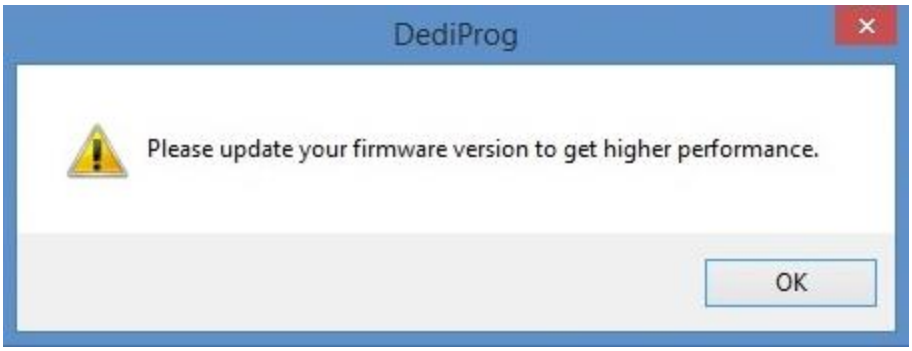
Step 2：Close the Dediware and open the **old** Dediware version.

Step 3：Going to Menu > Help > Firmware Manual update the firmware to 2.x.x version.

Step 4：Restart programmer and open the new Dediware to confirm the firmware version.

2. Firmware version is 2.x.x

The pop-up message shown below occurs when user opens Dediware after installing the new version of Dediware. Please update firmware with the following steps.

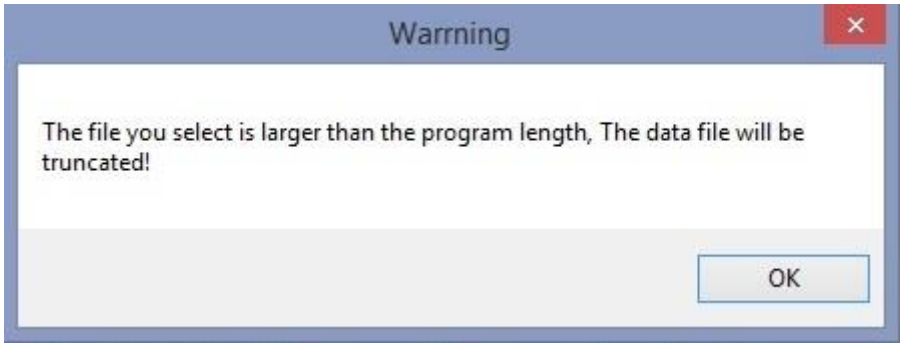


Step 1：Going to Menu > Help > Firmware Manual Update and select firmware (2.x.x) to update. The new firmware file will be saved to installation folder.

Step 2：Turn off the programmer power and turn on again. Open new Dediware and check the firmware version.

Q6. Message warning when loading files?

1. Selected file size is bigger than partition size. Press OK will truncate the file to fit the partition space. But Dediware does not check the data importance.



2. When the user load several files which will overwrite the old files. Please make sure the size and memory address of each file do not overlap each other.

Q7. About contact testing

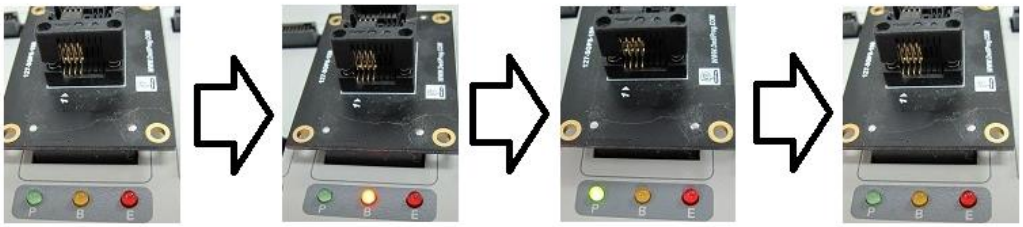
Dediware supports contact testing when using auto detection or manual mode for project programming. Contact testing can reduce the mistake made by the operator. The operation steps are showed below.

Step 1：The lights of original programmer status are all off.

Step 2：Start programming. The yellow light turns on.

Step 3：One of the successful green light or fail red light will turns on after programming. If the user presses the start button by accident, the programmer will not work while the IC is still in the socket.

Step 4：All lights will turns off after picking up the IC.



Contact testing will start working after running the" RunPrj".

Note：

If user only pressed the socket down but not pick up the IC (Step 3). The programmer will determine that IC has been picked. Contact testing only check IC and socket connecting but not detect IC programming or not. User can use Dediware to check the IC programming status.

IX.Revision History

Date	Version	Change
08/28/2013	1.0	Initial release
05/26/2014	1.1	● Remove MCU Prog / StarProg ATE(Flash) ● Separate StarProg to StarProg-F and StarProg-U
07/29/2014	2.0	New Dediware software release

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